

Two New Mite Species of the Genus *Thinoseius* (Acari: Gamasida: Eviphididae) from Japan

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Two new mite species of the genus *Thinoseius* are described and illustrated on the basis of material collected from intertidal zones in northern Japan. Another intertidal species, *Thinoseius occidentalis* Klimov, 1998, is recorded from Japan for the first time. *Thinoseius sawadai* sp. nov. and *T. occidentalis* inhabit tidal wrack, and *T. setifer* sp. nov. was found on the pleopods of the sea slater *Ligia cinerascens* Budde-Lund, 1885 (Isopoda). This is the first record of eviphidid mites from a ligiid isopod. The deutonymphs of *T. occidentalis* and *T. setifer* show a probable sexual dimorphism in the number of dorsal and/or opisthogastric setae.

Key Words: Eviphididae, *Thinoseius*, intertidal zone, *Ligia*, sexual dimorphism.

Introduction

The genus *Thinoseius* of the family Eviphididae consists of about 10 species of mites, which have been recorded from the coasts of North America, Europe, Far-Eastern Russia, and a few small islands in the Southern Hemisphere (Bregetova 1977; Canaris 1962; Evans 1962a, b; Hunter 1970; Klimov 1998). The mites are found in decayed seaweed, under rocks, in gull guano, and on sandhoppers *Orchestoidea* spp. (Crustacea: Amphipoda) in the intertidal zone. However, there is no reliable record from Japan, except for *Thinoseius* sp. recorded from tidal wrack and floating seaweed on the shore of the Kii Peninsula, western Japan (Sawada 1995). Through examination of gamasid mites in the intertidal zone of Oshoro Bay, Hokkaido, northern Japan, I found two species of mites assignable to the genus *Thinoseius* in decayed seaweed and on specimens of the sea slater *Ligia cinerascens* Budde-Lund, 1885. In the present study, the species previously recorded as *Thinoseius* sp. by Sawada (1995) and the above-mentioned species collected from sea slaters are described as new to science, and the species found in decayed seaweed is identified as a previously known form, recorded from Japan for the first time.

The mite specimens were extracted from tidal wrack by Tullgren funnel or were collected from the pleopods of sea slaters, except for those collected by Dr. K. Sawada. All the mites were fixed in 70% ethyl alcohol and some of the specimens were dissected under a stereoscopic microscope after clearing in lactophenol. Each body part was slide-mounted in Hoyer's medium. Observations were made with a

phase contrast microscope. Illustrations were prepared with the aid of a drawing apparatus.

In this paper, all measurements are given in micrometers (μm). Dorsal chaetotaxy follows Evans (1969). The holotype and a paratype of each of the new species will be deposited in the Natural History Museum, London. Paratypes also will be deposited in the zoological collections of the Graduate School of Science, Hokkaido University, Sapporo. Other specimens will be deposited in my private collection.

Family **Eviphididae** Berlese, 1913
 Subfamily **Thinoseinae** Evans, 1954
 Genus ***Thinoseius*** Halbert, 1920
Thinoseius occidentalipacificus Klimov, 1998
 [Japanese name: Mokuzu-yaridani, new]
 (Figs 1–4)

Thinoseius occidentalipacificus Klimov, 1998, pp. 4–9, figs 1–16.

The female, male, and deutonymph of *Thinoseius occidentalipacificus* were described and illustrated by Klimov (1998) on the basis of Russian specimens. The present material agrees with the original description and figures, but the body size is smaller than that of the Russian material in all the stages.

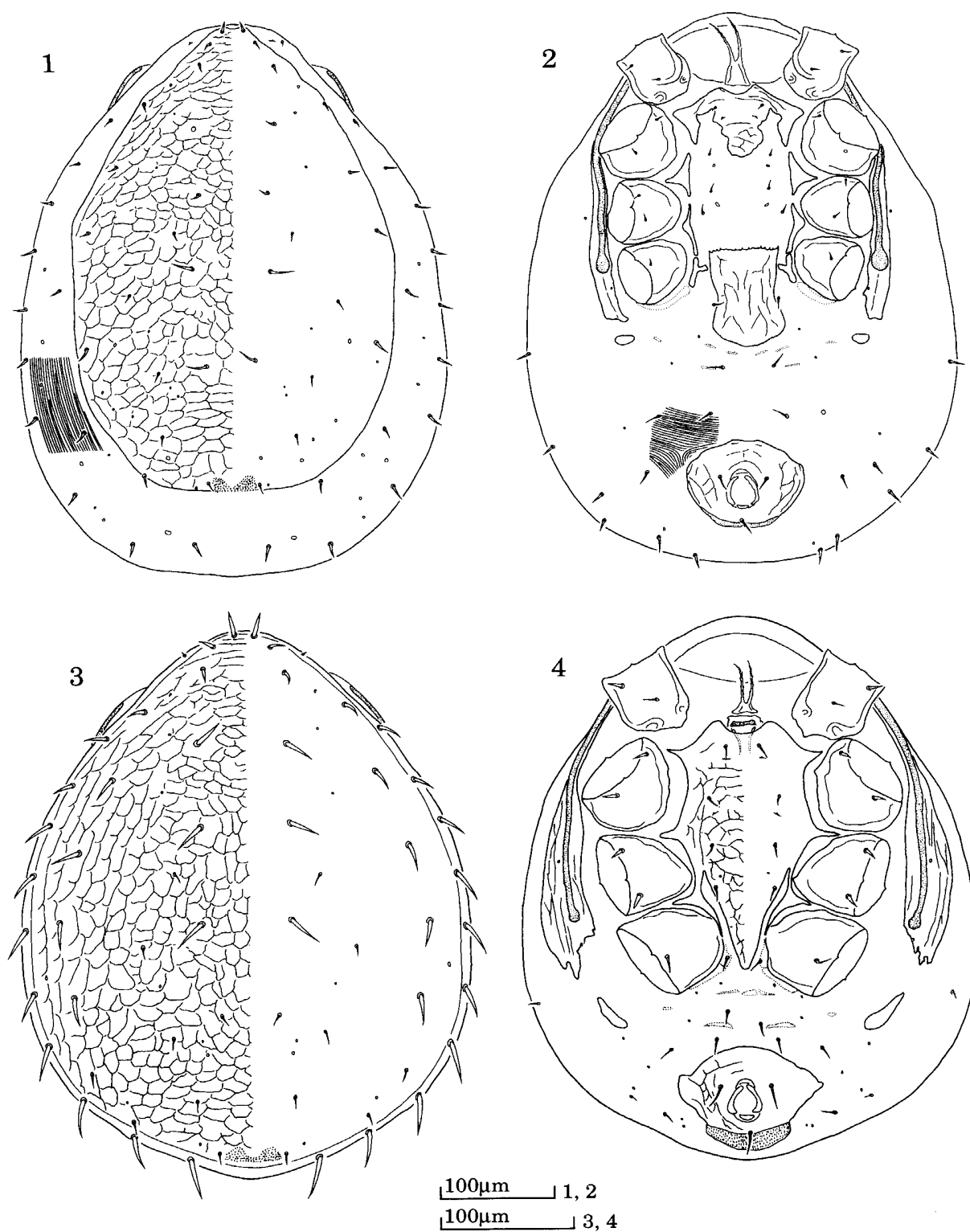
Like its congeners (Canaris 1962; Evans 1954, 1962a, b, 1969; Hirschmann 1966a, b; Hunter 1970; Willmann 1939), the present species has distinct sexual dimorphism in the development of the dorsal and ventral shields and the ornamentation of the dorsal, palptrochanter, and leg setae (Figs 1–4). In addition, the number of opisthogastric setae is different in females and males, i.e., six or seven pairs in males and 10 or 11 pairs in females. In the original description, the numbers of female and male opisthogastric setae are described as five and six pairs respectively but, judging from the figures and dorsal chaetotaxy provided, some of the integumental setae described as dorsal setae are opisthogastric setae, and the number of opisthogastric setal pairs in Russian *T. occidentalipacificus* is really six in the male and 10 in the female. The deutonymphs have a similar dimorphism in opisthogastric setae as the adults, and this suggests that the dimorphism arises in that stage.

Measurements. Female: length of idiosoma 494–569 (540.1 ± 21.6); width, 346–404 (381.4 ± 17.1) ($n=13$). Length of dorsal shield 408–477 (435.9 ± 17.1); width, 265–290 (275.2 ± 7.4) ($n=13$). Male: length of dorsal shield 412–453 (439.6 ± 12.9); width, 277–318 (305.2 ± 14.1) ($n=11$). Deutonymph: length of dorsal shield 388–412 (399.2 ± 7.4); width, 241–269 (258.3 ± 8.1) ($n=15$).

Material examined. Thirteen females, 11 males, and 15 deutonymphs collected from decayed seaweed in tidal wrack in Oshoro Bay, Otaru, Hokkaido, Japan, 6 September 1999, G. Takaku leg.

Habitat. In addition to the Japanese material collected from decayed seaweed, *Thinoseius occidentalipacificus* has been collected from grass litter, gull nest and guano on Lovushki Island, Kuril Islands, Russia (Klimov 1998).

Distribution. *Thinoseius occidentalipacificus* has been recorded from Lovushki Island, Kuril Islands, Russia (Klimov 1998). This is the first record of the species from Japan.



Figs 1–4. *Thinoseius occidentalapacificus* Klimov, 1998. 1, dorsum of female; 2, venter of female; 3, dorsal shield of male; 4, venter of male.

***Thinoseius sawadai* sp. nov.**

[Japanese name: Iso-yaridani]

(Figs 5–16)

Male. Length of dorsal shield 519–553; width, 437–453 (n=2). Living specimens yellowish or reddish brown.

Dorsum (Fig. 5). Dorsal shield subcircular, entirely covering idiosoma, and with 2 pairs of small fossae between setae J4 and J5; surface ornamented with reticulate pattern; lateral margin strongly crenulate; area between J5 with minute spicules. Shield bearing 30 pairs of dorsal setae; z1, z5, z6, J2–5, Z3, and Z4 fine and short; other dorsal setae, especially marginal setae, stout and long, and marginal setae surpassing insertions of setae behind them.

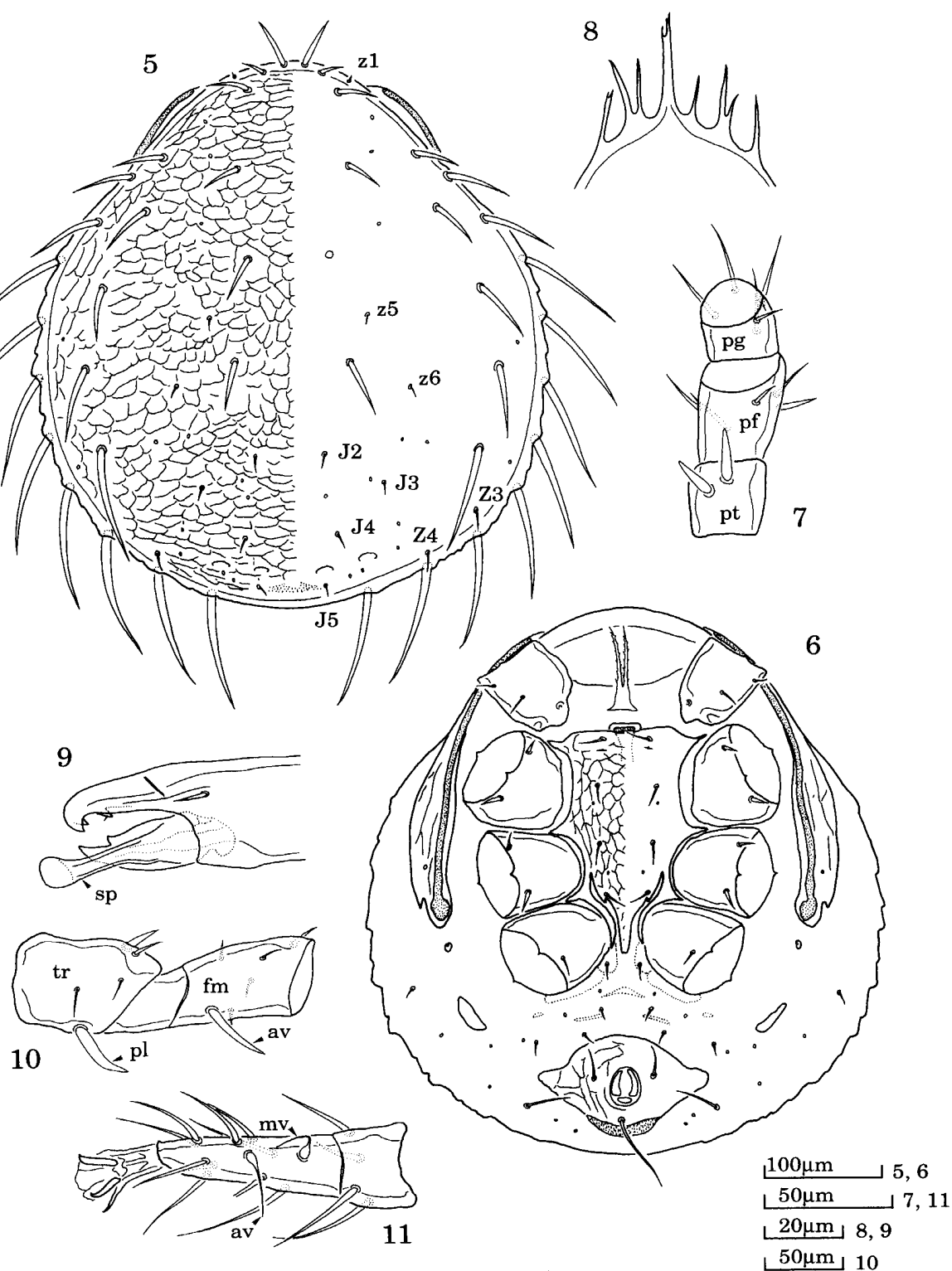
Venter (Fig. 6). Tritosternum well developed and with pilose laciniae. Sternoventral shield longer than wide; length 214–233, width at level of coxae II 92–94 (n=2); the shield well-sclerotized, fused with endopodal shields, and with 4 pairs of sternal setae and 3 pairs of pores; st5 located on integument behind sternoventral shield; all sternal setae simple; surface of the shield ornamented with reticulate pattern; genital orifice situated medially on anterior margin of shield.

Anal shield subtriangular, wider than long, and ornamented with reticulation; length 92–98, width 143–147 (n=2); pair of paranal setae and 1 postanal seta simple, and length of postanal seta (67) more than twice that of paranal setae (29; n=1); cribrum located posterior to postanal seta. Opisthogaster with 5 pairs of simple setae, 5 thin medial platelets, and pair of oblong metapodal shields. Peritrematic shield well-developed and free from ventral shields; peritremes extending to level anterior of coxae I.

Gnathosoma (Figs 7–9). Well-developed and sclerotized. Deutosternal groove with 5 rows of denticles; 3 pairs of hypostomal setae and 1 pair of palpcoxal setae all simple. Palpal chaetotaxy of trochanter, femur, and genu 2-5-5; both setae on palptrochanter thick (Fig. 7). Palptarsus with bifurcated apotele. Tectum (Fig. 8) with 6 or 8 marginal processes, these bifurcated or trifurcated distally in some specimens. Fixed digit of chelicera (Fig. 9) with simple dorsal seta, medial tooth, distal tooth, *pilus dentilis*, and terminal hook; movable digit with medial tooth, terminal hook, and hooked spermatodactyl; spermatodactyl typical for genus; length of fixed digit 139–143, length of movable digit 39–41 (n=2).

Legs (Figs 10, 11). All tarsi with ambulacra and paired claws. Coxae I with 2 fossae proximally. Each segment of leg with both simple fine setae and thick setae, except for coxae I, IV, tibia I, and tarsus I, with only simple fine setae; posteroventral seta of femur II, ventral setae of femur III, anterodorsal and posterolateral setae of trochanter IV, and anteroventral seta of femur IV stouter and longer than other leg setae (Fig. 10); medio- and anteroventral setae of tarsi II and III thickened at base and attenuated distally (Fig. 11). Leg chaetotaxy as follows (coxa; trochanter; femur; genu; and tibia): leg I: 0, 0/1, 0/1, 0; 1, 0/1, 0/2, 1; 2, 3/1, 2/2, 2; 1, 3/2, 2/1, 2; 1, 3/2, 2/1, 2. Leg II: 0, 0/1, 0/1, 0; 1, 0/1, 0/2, 1; 1, 3/1, 2/2, 1; 1, 3/1, 2/1, 2; 1, 2/1, 2/1, 2. Leg III: 0, 0/1, 0/1, 0; 1, 1/1, 0/1, 1; 1, 2/1, 1/1, 1; 1, 2/1, 2/0, 1; 1, 1/1, 2/1, 1. Leg IV: 0, 0/0, 0/1, 0; 1, 1/1, 0/1, 1; 1, 2/1, 1/0, 1; 1, 2/1, 2/0, 1; 1, 1/1, 2/1, 1.

Leg length (except ambulacrum): leg I, 527–539; leg II, 420–432; leg III, 445–449; leg IV, 547–571 (n=2).



Figs 5–11. *Thinoseius sawadai* sp. nov., male (holotype). 5, dorsal shield; 6, venter; 7, ventral view of palptrochanter, femur, and genu; 8, tectum; 9, chelicera; 10, ventral view of trochanter and femur of leg IV; 11, ventral view of tarsus of leg III. (av, anteroventral seta; fm, femur; mv, medioventral seta; pf, palpfemur; pg, palpgenu; pl, posterolateral seta; pt, palptrochanter; sp, spermatodactyl; tr, trochanter)

Deutonymph. Length of dorsal shield 519–527; width, 363–379 (n=2). Living specimens yellowish brown.

Dorsum (Fig. 12). Dorsal shield oval, entirely covering idiosoma, and with 2 pairs of small fossae between setae J4 and J5; surface ornamented with reticulate pattern; anterior margin with 2 pairs of distinct projections; lateral margin strongly crenulate; area between J5 without spicules. Shield bearing 30 pairs of dorsal setae; j4, j5, z1, z5, z6, and J2–5 fine and short; other dorsal setae, especially marginal setae, stout and long, and marginal setae surpassing insertions of setae behind them.

Venter (Fig. 13). Tritosternum well developed and with pilose laciniae. Sternoventral shield longer than wide; length 204–214, width at level of second sternal setae 67–75 (n=2); the shield well-sclerotized, fused with endopodal shields of leg II, free from endopodal shields of legs III and IV, and with 4 pairs of sternal setae and 3 pairs of pores; st5 located on integument behind sternoventral shield; all sternal setae simple; surface of the shield ornamented with reticulate pattern.

Anal shield subtriangular, wider than long, and ornamented with reticulation; length 88, width 116–120 (n=2); pair of paranal setae and 1 postanal seta simple, and length of postanal seta (54) more than twice that of paranal setae (25; n=1); cribrum located posterior to postanal seta. Opisthogaster with 5 pairs of simple setae, 1 or 3 medial platelets, and pair of oblong metapodal shields. Peritrematic shield well-developed and free from ventral shields; peritremes extending to level anterior of coxae I.

Gnathosoma (Figs 14–16). Well-developed and sclerotized. Deutosternal groove with 5 rows of denticles; 3 pairs of hypostomal setae and 1 pair of palpcoxal setae all simple. Palpal chaetotaxy of trochanter, femur, and genu 2-5-5; both setae on palptrochanter simple and fine (Fig. 14). Palptarsus with bifurcated apotele. Tectum (Fig. 15) with 7 or 8 processes, these bifurcated or trifurcated distally in some specimens. Fixed digit of chelicera (Fig. 16) with simple dorsal seta, proximal bidentate tooth, medial tooth, *pilus dentilis*, and terminal hook; movable digit with medial tooth and terminal hook; length of fixed digit 131–137, length of movable digit 49–52 (n=2).

Legs. All tarsi with ambulacra and paired claws. Coxae I with 2 fossae proximally. Each segment of all legs with simple setae. Leg chaetotaxy of deutonymph as in male.

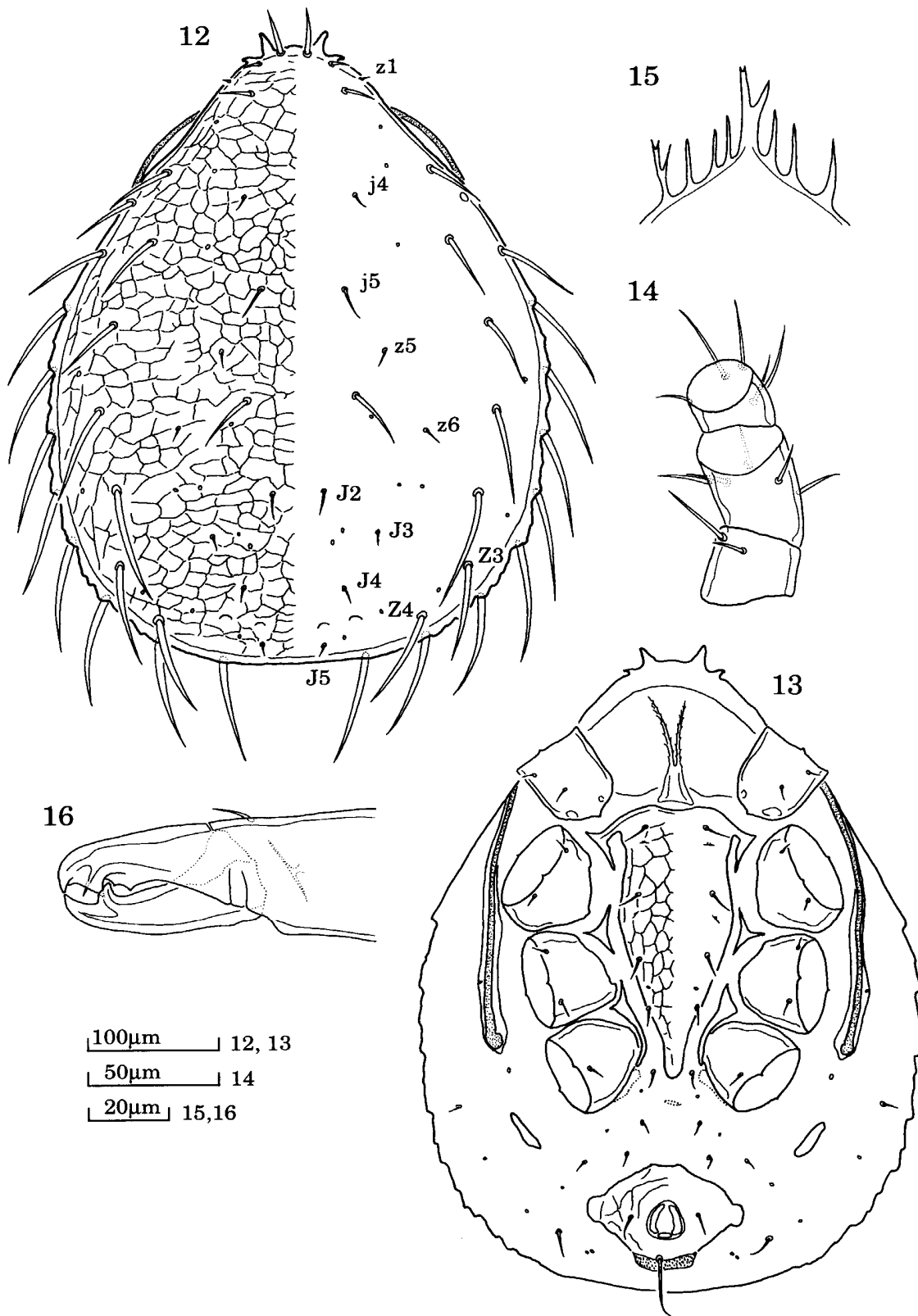
Leg length (except ambulacrum): leg I, 432; leg II, 367; leg III, 347; leg IV, 449 (n=1).

Female, protonymph, larva. Unknown.

Type series. Holotype: male, collected from tidal wrack and floating seaweed on shore, Nagamatsu Beach, Misaki Town, Sennan District, Osaka Prefecture, Japan, 5 October 1990, K. Sawada leg. Paratypes: 1 male and 2 deutonymphs, other data same as for holotype.

Etymology. The species is named after Dr. K. Sawada, who recorded this species as *Thinoseius* sp. for the first time from Japan.

Remarks. Sawada (1995) misidentified the deutonymph as a female, and the female remains unknown. *Thinoseius sawadai* is very similar to *T. spinosus* (Willmann, 1939) in the ornamentation of the dorsal setae, as Sawada (1995) mentioned. However, *T. sawadai* is distinguished from *T. spinosus* by the following characters (corresponding conditions of *T. spinosus* in parentheses): 1) dorsal setae J2, Z3, and



Figs 12–16. *Thinoseius sawadai* sp. nov., deutonymph (paratype). 12, dorsal shield; 13, venter; 14, ventral view of palptrochanter, femur, and genu; 15, tectum; 16, chelicera.

Z4 fine and short in male (stout and long); 2) anterior margin of dorsal shield with 2 pairs of distinct projections in deutonymph (without such projections); 3) postanal seta more than twice as long as paranal setae in male and deutonymph (postanal seta similar to paranal setae in length).

Thinoseius sawadai is also similar to *T. occidentalipacificus*, but it differs from the latter as follows (corresponding conditions of *T. occidentalipacificus* in parentheses): 1) lateral margin of dorsal shield distinctly crenulate in male and deutonymph (smooth or slightly serrate); 2) dorsal marginal setae long and surpassing insertion of setae behind them in male and deutonymph (short and not surpassing more posterior setal insertions); 3) postanal seta more than twice as long as paranal setae in male and deutonymph (postanal seta similar to paranal setae in length); 4) anterior margin of dorsal shield with 2 pairs of projections in deutonymph (without such projections).

***Thinoseius setifer* sp. nov.**

[Japanese name: Toge-isoyaridani, new]
(Figs 17–33)

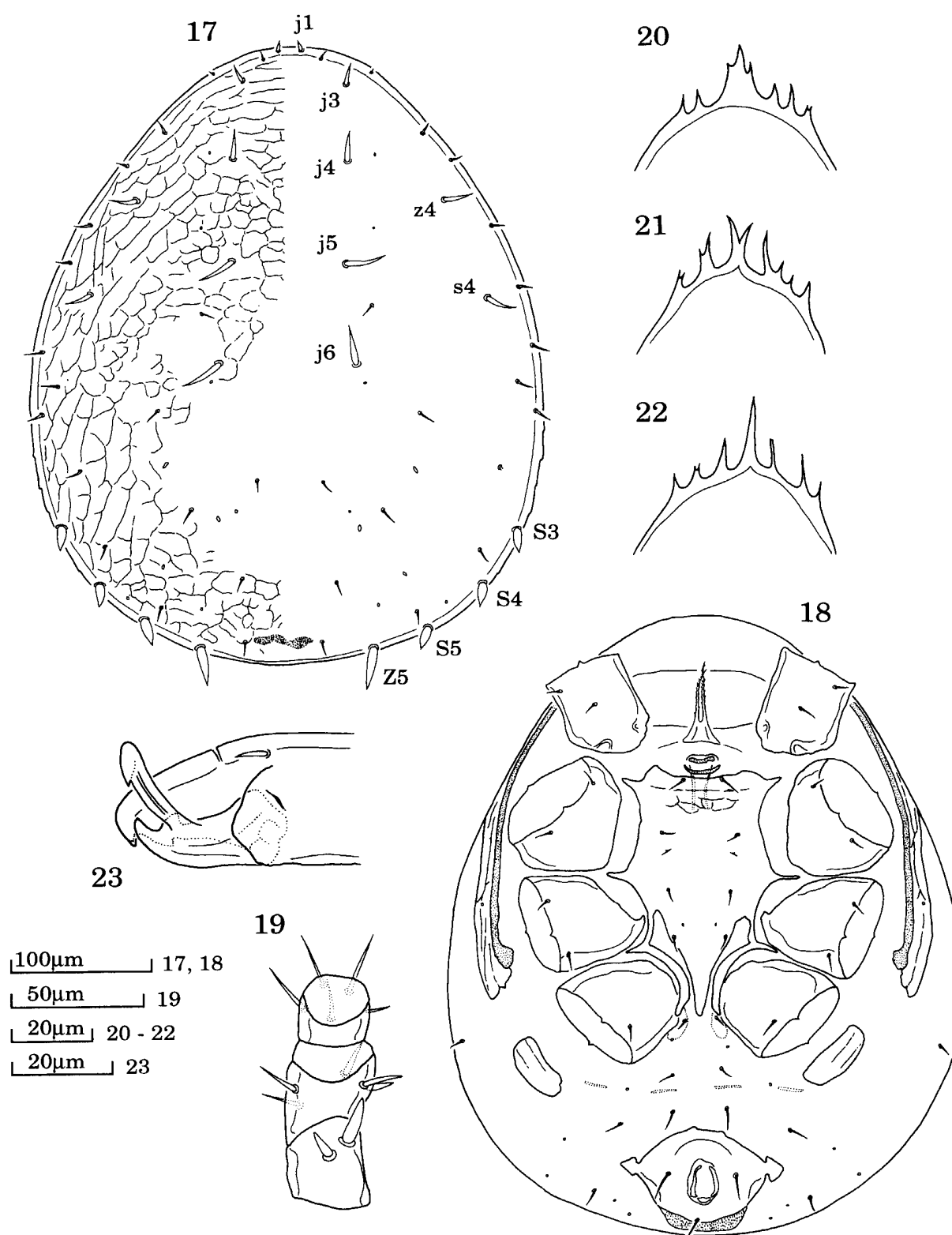
Male. Length of dorsal shield 428–494 (465.8 ± 23.8); width, 286–363 (332.8 ± 26.3) (n=9). Living specimens yellowish brown.

Dorsum (Fig. 17). Dorsal shield oval and entirely covering idiosoma; surface of the shield ornamented with reticulate pattern, but weakly so in posteromedial region; posterolateral margin slightly serrate; area between setae J5 with minute spicules. Shield bearing 29 pairs of dorsal setae; setae S2 absent; setae j1, j3–6, z4, and s4 thick; posterior marginal setae S3–5 and Z5 thick and conical; other setae fine and minute.

Venter (Fig. 18). Tritosternum well developed and with pilose laciniae. Sternoventral shield longer than wide; length 173–200 (190.6 ± 8.5), width at level of coxae II 82–94 (86.9 ± 4.4) (n=9); the shield well-sclerotized and with 4 pairs of sternal setae and 3 pairs of pores; st5 located on integument behind sternoventral shield; all sternal setae simple; surface of the shield with slightly reticulate ornamentation in anterior region; genital orifice situated medially on anterior margin of shield.

Anal shield oval and with lateral extensions; length 65–94 (77.9 ± 8.8), width 112–129 (117.7 ± 5.4) (n=9); pair of paranal setae and 1 postanal seta simple, and length of postanal seta almost same as that of paranal setae, 18–20 (19.0 ± 1.2) versus 16–27 (20.8 ± 5.6), respectively (n=4); cribrum located posterior to postanal seta. Opisthogaster with 5 pairs of simple setae, 2 to 7 thin medial platelets, and pair of large metapodal shields. Peritrematic shield well-developed and separated from ventral shields; peritremes extending to level anterior of coxae I.

Gnathosoma (Figs 19–23). Well-developed and sclerotized. Deutosternal groove with 5 or 6 rows of denticles; 3 pairs of hypostomal setae and pair of palpcoxal setae all simple. Palpal chaetotaxy of trochanter, femur, and genu 2-5-5; both setae on palptrochanter thick (Fig. 19). Palptarsus with bifurcated apotele. Tectum (Figs 20–22) multidentate and with 6 or 7 processes, latter bifurcated or trifurcated distally in some specimens. Fixed digit of chelicera (Fig. 23) with simple dorsal seta, medial tooth, distal tooth, and terminal hook; *pilus dentilis* absent; movable digit with



Figs 17-23. *Thinoseius setifer* sp. nov., male (17-20, 23: holotype. 21, 22: paratypes). 17, dorsal shield; 18, venter; 19, ventral view of palptrochanter, femur, and genu; 20-22, tectum; 23, chelicera.

medial tooth, terminal hook, and hooked spermatodactyl; spermatodactyl typical for genus; length of fixed digit 102–114 (109.3 ± 4.5), length of movable digit 24–31 (27.7 ± 3.2) ($n=6$).

Legs. All tarsi with ambulacra and paired claws. Coxae I with 2 fossae proximally. Each segment of leg with both simple fine setae and thick setae, except for coxae I–IV, tibia I, and tarsi I–IV, with only simple fine setae; posteroventral seta of femur II, ventral setae of femur III, and anteroventral seta of femur IV stouter and longer than other leg setae (as in Fig. 10); medio- and anteroventral setae of tarsi II and III thickened at base and attenuated distally (as in Fig. 11). Leg chaetotaxy of male as in male of *Thinoseius sawadai*.

Leg length (except ambulacrum): leg I, 408–461 (433.0 ± 19.8 , $n=7$); leg II, 335–404 (363.5 ± 24.0 , $n=8$); leg III, 314–396 (356.6 ± 24.4 , $n=9$); leg IV, 412–481 (433.8 ± 22.7 , $n=9$).

Deutonymph. Length of dorsal shield 396–445 (423.1 ± 14.2); width, 257–318 (287.8 ± 14.4) ($n=17$). Living specimens yellowish brown.

Dorsum (Figs 24, 26, 27). Dorsal shield oval, entirely covering idiosoma; surface ornamented with reticulate pattern, but weakly so in medial region; postero-lateral margin slightly serrate; area between setae J5 without minute spicules. Shield bearing 29 or 30 pairs of dorsal setae; setae S2 absent or present (Figs 26, 27); setae j3–6, z4, s4, s5, and Z2 thick; other dorsal setae fine and minute.

Venter (Figs 25, 28, 29). Tritosternum well developed and with pilose laciniae. Sternoventral shield longer than wide; length 163–188 (179.6 ± 6.4), width at level of second setae 71–82 (74.3 ± 2.6) ($n=17$); the shield well-sclerotized and with 4 pairs of sternoventral setae and 3 pairs of pores; st5 located on integument behind sternoventral shield; all these setae simple; surface with slightly reticulate ornamentation in anterior region.

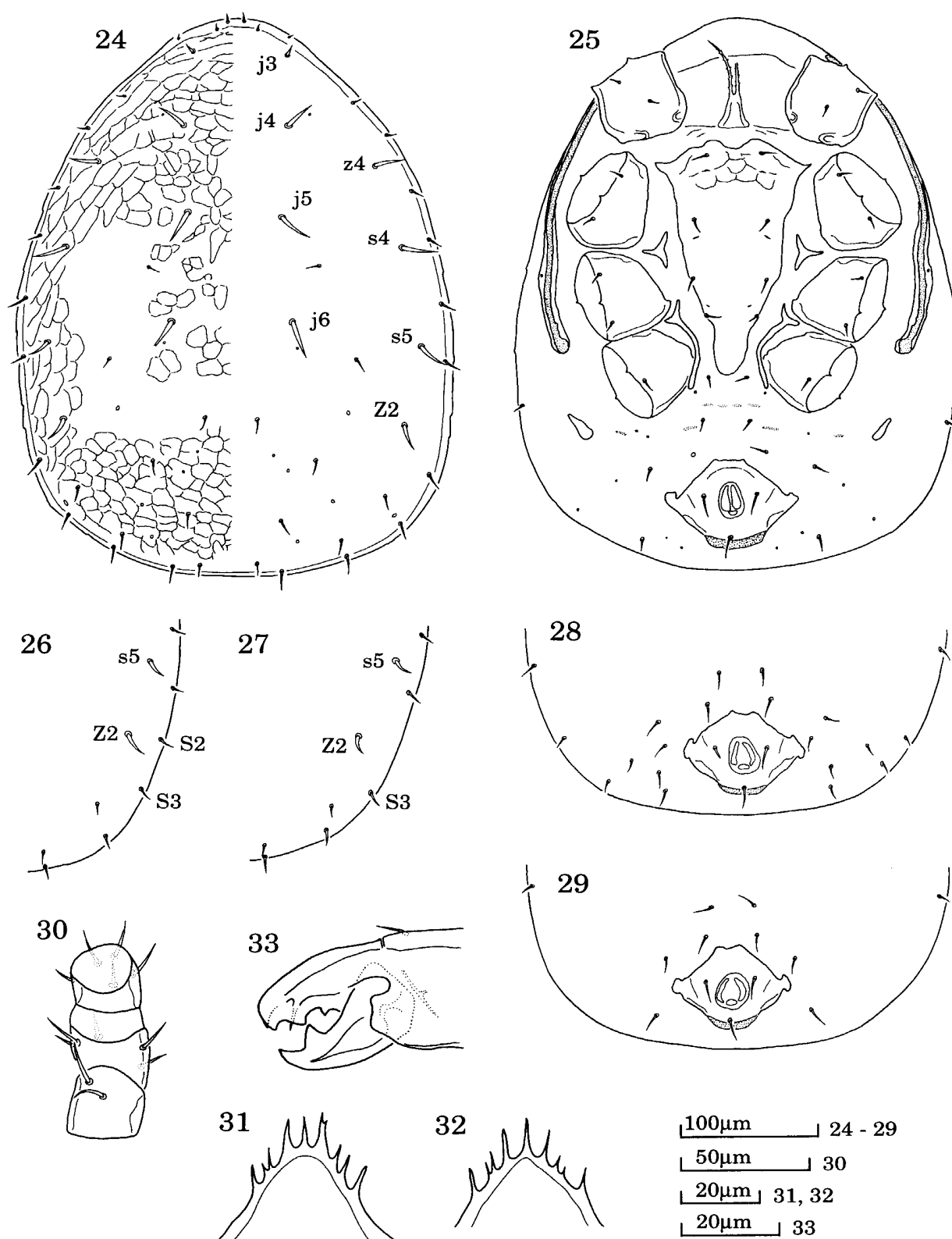
Anal shield oval with lateral extensions; length 53–71 (62.6 ± 3.8), width 82–100 (89.3 ± 5.3) ($n=17$); pair of paranal setae and 1 postanal seta simple and all the setae approximately equal length: paranal setae 16–22 (19.2 ± 1.5), postanal setae 18–20 (18.7 ± 1.0) ($n=15$); cribrum located posterior to postanal seta. Opisthogaster with 5 or 8 to 10 pairs of simple setae (Figs 28, 29), 2 to 7 thin plates, and pair of small metapodal shields. Peritrematic shield narrow and free from ventral shields; peritremes extending to level anterior of coxae I.

Gnathosoma (Figs 30–33). Well-developed and sclerotized. Deutosternal groove with 4 or 5 rows of denticles; 3 pairs of hypostomal setae and pair of palpcoxal setae all simple. Palpal chaetotaxy of trochanter, femur, and genu 2-5-5; both setae on palptrochanter simple (Fig. 30). Palptarsus with bifurcated apotele. Tectum (Figs 31, 32) multidentate, with 6 to 9 processes, latter bifurcated or serrate distally in some specimens. Fixed digit of chelicera (Fig. 33) with proximal small tooth, medial tooth, *pilus dentilis*, terminal hook, and small tooth on the tip; movable digit with medial tooth and terminal hook; length of fixed digit 88–92 (90.8 ± 1.8), length of movable digit 27–31 (29.4 ± 1.4) ($n=8$).

Legs. All tarsi with ambulacra and paired claws. Coxae I with two fossae proximally. Each segment of all legs with simple setae. Leg chaetotaxy of deutonymph as in male.

Leg length (except ambulacrum): leg I, 322–384 (362.1 ± 16.4 , $n=10$); leg II, 273–314 (297.9 ± 10.2 , $n=17$); leg III, 282–318 (302.5 ± 10.3 , $n=17$); leg IV, 335–392 (363.1 ± 14.8 , $n=17$).

Female, protonymph, larva. Unknown.



Figs 24-33. *Thinoseius setifer* sp. nov., deutonymph (paratypes). 24, dorsal shield; 25, venter; 26, 27, dimorphism in number of dorsal marginal setae; 28, 29, dimorphism in number of opisthogastric setae; 30, ventral view of palptrochanter, femur, and genu; 31-32, tectum; 33, chelicera.

Table 1. Number of setae on dorsal shield and opisthogaster of male and deutonymph of *Thinoseius setifer*. Two setal patterns (Type I, II) were found in the deutonymph.

	Male	Deutonymph	
		Type I	Type II
Dorsal shield	29 pairs	29 pairs	30 pairs
Opisthogaster	5 pairs	5 pairs	8–10 pairs

Type series. Holotype: male, Oshoro Bay, Otaru, Hokkaido, Japan, 12 September 1991, Y. Takashima leg., *ex Ligia cinerascens*. Paratypes: 7 males and 12 deutonymphs, Y. Takashima leg.; 1 male, 4 August 1999, K. Watanabe and G. Takaku leg.; 2 deutonymphs, 21 July 1999, G. Takaku leg.; 1 deutonymph, 26 July 1999, G. Takaku leg.; 2 deutonymphs, 27 July 1999, G. Takaku leg. Locality and host for all paratypes are the same as for holotype.

Other material. Two males and 36 deutonymphs, Oshoro Bay, Otaru, Hokkaido, Japan, 9 May 1991, G. Takaku leg., *ex Ligia cinerascens*; 7 deutonymphs, 30 July 1991, Y. Takashima leg.; 63 deutonymphs, 12 September 1991, Y. Takashima leg.; 7 deutonymphs, 4 June 1992, G. Takaku leg.; 8 deutonymphs, 2 June 1995, G. Takaku leg.; 4 deutonymphs, 21 July 1999, G. Takaku leg.; 2 deutonymphs, 19 August 1999, G. Takaku leg.; 5 males and 110 deutonymphs, 6 September 1999, G. Takaku leg. Locality and host for the above materials are the same as for holotype. Twelve males and 17 deutonymphs, Ena Bay, Miura, Kanagawa Prefecture, 10 October 1999, M. Nagahori leg., *ex Ligia cinerascens*.

Etymology. The specific name, a noun in apposition, refers to the thick conical setae on the posterolateral margin of the dorsal shield of the male.

Remarks. *Thinoseius setifer* is distinguished from its congeners by the following distinct characters in the male: 1) dorsal shield with 29 pairs of setae, i.e., setae S2 absent; and 2) posteromarginal dorsal setae S3–5 and Z5 thick and conical. The deutonymph of the present species is distinguished from its congeners by the following dorsal characters: 1) setae j3–j6, z4, s4, s5, and Z2 thick in comparison with other dorsal setae; and 2) dorsal shield with 29 or 30 pairs of setae.

The deutonymphs of *T. setifer* show dimorphism in the numbers of dorsal and opisthogastric setae: one type is characterized by 29 pairs of setae on the dorsal shield and 5 pairs of opisthogastric setae, the other by 30 pairs of dorsal setae and 8 to 10 opisthogastric setae (Figs 26–29, Table 1). Although no female has been collected, this dimorphism may be presumptive evidence of sexual dimorphism in the adult since strong differences between males and females in dorsal setal number have been recorded in some species of the genus *Thinoseius* (Canaris 1962; Evans 1954, 1962a, b, 1969; Hirschmann 1966a, b; Hunter 1970; Willmann 1939; also see notes on *T. occidentalis pacificus* in the present paper).

Thinoseius setifer is specific to sea slaters, an isopod group (order Oniscoidea, family Ligiidae) not previously recorded as carriers of eviphidid mites. Examination of 269 individual sea slaters resulted in the recovery of 49 *T. setifer* (infestation rate 0.18). Most of the mites were attached to the second pleopods of the sea slaters (Table 2), but the reason for this site specificity is unknown.

Table 2. Distribution of *Thinoseius setifer* sp. nov. on 269 examined individuals (A) of sea slaters, *Ligia cinerascens*.

	Body parts of sea slater				
	First pleopod		Second pleopod		Other parts
	Left	Right	Left	Right	
Number of sea slaters infested with mites (B)	2	1	37	32	0
Infestation rate on each body part (%) (B/A)	0.7	0.3	12.5	11.8	0
Number of mites (C)	2	1	135	139	0
Average number of mites per each body part of sea slater infested (C/B)	1	1	3.7	4.3	0

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